Phytologia (October 1989) 67(4):307-311.

CONSPECTUS OF THE MEXICAN SPECIES, *BRICKELLIA SECUNDIFLORA* (LAG.) A. GRAY, AND ITS INFRASPECIFIC CATEGORIES

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ABSTRACT

Brickellia secundiflora is a widespread common species of the Central Plateau region of México, occurring from southern Coahuila to northern Oaxaca. It is readily distinguished from most other species by having its upper leaves mostly alternate, pendulent heads and pubescent receptacles. Four regional varieties within this complex are recognized: 1) var. *secundiflora*, occurring along the eastern portions of the Central Plateau; 2) var. *parryi*, occurring in the south central portion; 3) var. *nepetifolia*, occurring along the western periphery; and 4) var. *monticola*, occurring in western Jalisco along the Pacific slopes. A key to the taxa is provided and a dot map showing the distribution of each is presented. One new combination, **B. secundiflora** var. **parryi** (A. Gray) B. Turner, has proved necessary.

KEY WORDS: *Brickellia*, Asteraceae, Eupatorieae, México, systematics.

Robinson (1917) recognized two varieties under the common, relatively widespread, Mexican species, *Brickellia secundiflora*. McVaugh (1984) retained both of these, but added a third, var. *monticola*. I will recognize all of these in my forthcoming treatment of *Brickellia* for the Asteraceae of México. In addition, I recognize a fourth infraspecific taxon, var. *parryi*, which includes elements of McVaugh's concept of var. *monticola*. The four regional taxa are essentially allopatric, as shown in Figure 1. The several varieties can be distinguished using the following key. Specimens intermediate between the taxa, or approaching one or the other, may be found near regions of contact. Additional comments upon the characters which distinguish between them, and relevant synonymy, are given under the names listed.

Key to varieties

1. Peduncles to some extent glandular-pubescent, either throughout or with mixed eglandular and glandular hairs; florets mostly 8-20 per head ..... (2)

1. Peduncles without glandular hairs; florets mostly 20-30 per head .... (3)

    2. Florets mostly 8-15(-17) per head; receptacles sparsely pubescent; achenes densely pubescent throughout ..... var. *nepetifolia*

    2. Florets mostly 15-21 per head; receptacles sparsely to densely pubescent; achenes sparsely to moderately pubescent, usually in distinct lines ..... var. *secundiflora*

3. Involucres 13-15 mm high, the bracts more or less abruptly acute or obtuse-apiculate; western Jalisco ..... var. *monticola*

3. Involucres 11-13 mm high, the bracts gradually acuminate; widespread (Figure 1) ..... var. *parryi*

Brickellia secundiflora (Lag.) A. Gray, Pl. Wright 2:85. 1852. var. *secundiflora*. *Eupatorium secundiflorum* Lag., Gen. Sp. Pl. 25. 1816. *Bulbostylis secundiflora* (Lag.) DC., Prodr. 5:138. 1836. *Coleosanthus secundiflorus* (Lag.) Ktze., Revis. Gen. Pl. 328. 1891.

Coleosanthus cavanillesii Cass., Dict. Sci. Nat. 10:37. 1817. *Bulbostylis cavanillesii* (Cass.) DC., Prodr. 5:138. 1836.

Bulbostylis scorodoniifolia Kunth, Ind. Sem. Hort. Berol. 12. 1847.

Brickellia saltillensis B.L. Robins., Proc. Amer. Acad. Arts 43:37. 1907.

As noted by both Robinson (1917) and McVaugh (1984), var. *secundiflorus* is a taxon of the eastern portions of the Central Plateau ranging from southern Tamaulipas to northern Oaxaca. It grades into var. *parryi* to the west and is very similar to var. *nepetifolia*, the latter occurring along the western portions of the Central Plateau, possessing fewer florets to a head and sparsely pubescent receptacles. Although recognized by Robinson (1917) as distinct, I cannot retain *B. saltillensis*, the type material (F!,GH!) being essentially the same as var. *secundiflora* as conceived here.

Brickellia secundiflora (Lag.) A. Gray var. *monticola* McVaugh, Contr. Univ. Michigan Herb. 9:383. 1972.

My concept of this taxon is essentially the same as that of McVaugh except that I would exclude the several collections which he cites from Michoacán, all of which I would include in var. *parryi*. Some of these are somewhat intermediate to var. *monticola* but can be distinguished by their somewhat smaller heads and thinner, gradually acuminate involucral bracts.

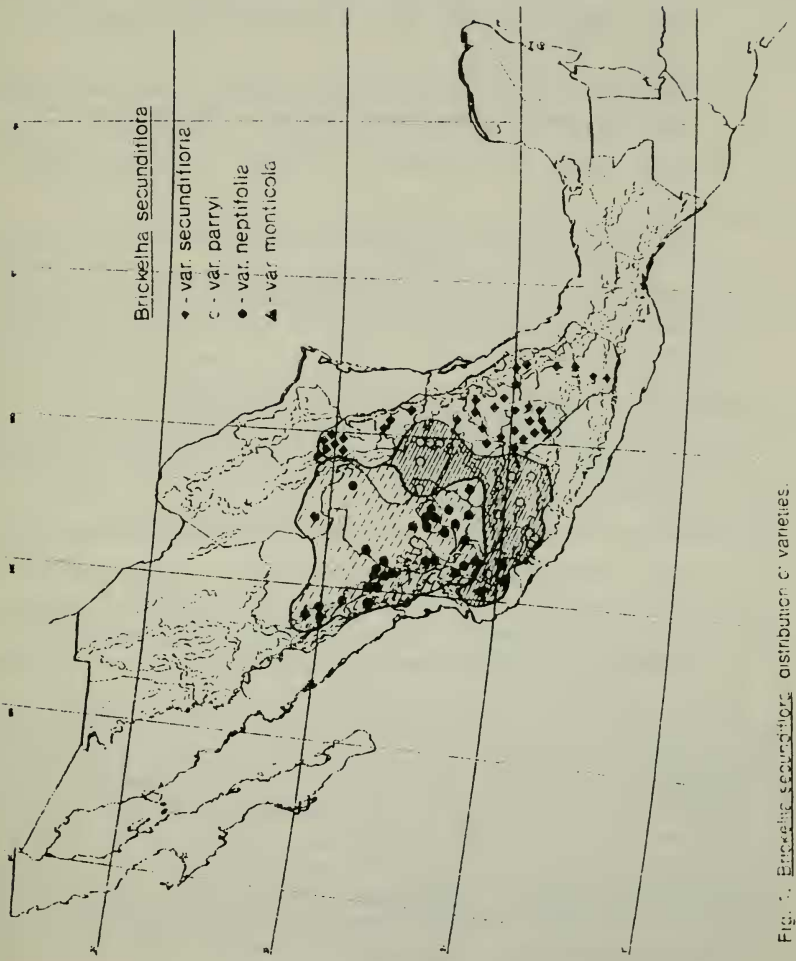

Fig. 1. Brickellia secundiflora, distribution of varieties.

Brickellia secundiflora (Lag.) A. Gray var. *nepetifolia* (H.B.K.) B.L. Robins., Mem. Gray Herb. 1:82. 1917. *Eupatorium nepetifolium* H.B.K., Nov. Gen. Sp. 4:87. 1818.

Brickellia seemannii A. Gray, Proc. Amer. Acad. Arts 15:30. 1879. *Coleosanthus seemannii* (A. Gray) Ktze., Revis. Gen. Pl. 328. 1891.

Brickellia palmeri var. *amphothrix* B.L. Robins., Mem. Gray Herb. 1:74. 1917.

Robinson (1917) retained *Brickellia seemannii* but McVaugh (1984) noted that "The species is not very different from *Brickellia secundiflora*," excluding this from his *Flora Novo-Galiciana* as perhaps doubtful. I have little hesitation in placing *B. seemannii* in synonymy here. Occasional plants of var. *nepetifolia* will have eglandular peduncles, or nearly so, but these are otherwise typical.

Brickellia secundiflora (Lag.) A. Gray var. **parryi** (A. Gray) B. Turner, *comb. nov.* Based upon *Brickellia parryi* A. Gray, Proc. Amer. Acad. Arts 15:31. 1879. *Coleosanthus parryi* (A. Gray) Ktze., Revis. Gen. Pl. 328. 1891.

Brickellia parryi var. *micacea* B.L. Robins., Mem. Gray Herb. 1:83. 1917.

I cannot distinguish *Brickellia parryi* from *B. secundiflora*. Indeed, it appears to be comprised of populational forms of *B. secundiflora* which merely lack glandular trichomes on the peduncles. With the description of var. *micacea*, Robinson created the automatic varietal name *parryi*, which is adopted here, as mandated by the most recent *Code of Botanical Nomenclature*. McVaugh (1984) would presumably include much of what I call var. *parryi* in his concept var. *monticola* (see comments under the latter); if logically expanded so as to include those specimens of *B. secundiflora* with numerous flowered heads (20+ florets) and strictly eglandular peduncles, the var. *monticola* would fall into synonymy under the earlier var. *parryi*. In any case, I view var. *monticola* as a very distinct varietal unit, occurring at relatively high elevations along the Pacific slopes of western Jalisco (2000-2300 m), recognized by its larger involucres with thickened striate involucral bracts which are abruptly acuminate at the apices.

ACKNOWLEDGMENTS

This study, including the map (Figure 1), is based upon the examination of approximately 140 specimens from the following herbaria (F,GH,LL,MICH, TEX,WIS). Vouchers for the representative specimens are listed in the appendix below. I am grateful to the Directors concerned for the loan of their material. Guy Nesom and Beryl Simpson reviewed the manuscript.

LITERATURE CITED

McVaugh, R. 1984. *Brickellia*, in *Flora Novo-Galiciana* 12:153-187.

Robinson, B.L. 1917. A monograph of the genus *Brickellia*. Mem. Gray Herb. 1:1-151.

APPENDIX: REPRESENTATIVE SPECIMENS (ALL FROM MÉXICO)*

Brickellia secundiflora var. *monticola*:
JALISCO: *McVaugh 11794* (MICH [holotype!]); *McVaugh 20528* (LL,MICH); *Iltis 1056* (TEX,WIS).

Brickellia secundiflora var. *nepetifolia*:
COAHUILA: *Villareal 1791* (TEX); *Henrickson 13101* (LL), form with eglandular peduncles. DURANGO: *Breedlove 15543* (MICH); *Gentry 6909, 6925* (MICH). AGUASCALIENTES: *Rzedowski 24995* (MICH). GUANAJUATO: *McVaugh 24100* (MICH). JALISCO: *Feddema 2286* (MICH); *McVaugh 20613A* (MICH), intermediate with var. *parryi*. ZACATECAS: *Bartholomew 3602* (TEX).

Brickellia secundiflora var. *parryi*:
SAN LUIS POTOSÍ: *Parry & Palmer 363* (F! [isotype]); *Turner 76-2* (LL). JALISCO: *McVaugh 22010* (LL). MICHOACÁN: *King 4763* (TEX).

Brickellia secundiflora var. *secundiflora*:
COAHUILA: *Pringle 10082* (isotype of *B. saltillensis*, LL!). NUEVO LEÓN: *Sundberg 3123* (TEX). HIDALGO: *Barrie 801* (TEX). MÉXICO: *Garcia 1416* (TEX). PUEBLA: *Tenorio 14286* (MEXU,TEX). VERACRUZ: *Turner 15429* (TEX,XAL). OAXACA: *Tenorio 7953* (MEXU,TEX).

*The holdings at LL, TEX include 54 specimens, as follows: var. *secundiflora* (22); var. *monticola* (2); var. *nepetifolia* (22); var. *parryi* (8). These have all been annotated by the present author.